

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference AZ02-097WODA	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/KR 2002/002272	International filing date (day/month/year) 3 December 2002 (03.12.2002)	(Earliest) Priority Date (day/month/year)
Applicant LG ELECTRONICS INC.		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 4 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

2. ☐ Certain claims were found unsearchable (See Box I).

3. ☐ Unity of invention is lacking (See Box II).

4. With regard to the title,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

☐ the text is approved as submitted by the applicant.

☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the drawings to be published with the abstract is Figure No.: 4

☒ as suggested by the applicant.

☐ None of the figures.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

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Box III TEXT OF THE ABSTRACT (Continuation of item 5 of the first sheet)

The present invention relates to a flow spreading mechanism, in particular a flow spreading mechanism used with refrigerators or air conditioners to enhance spreading of cool or warm air. To achieve the above-mentioned object, this invention comprises at least one inlet (200) through which fluid flow comes in; a flow separator means (110) dividing the flow coming through the at least one inlet (200) into at least two separate flows; and an outlet (300) through which at least two of the at least two flows having been divided into separate flows by the flow separator means go out after they meet again, thereby forming complex vortices near the outlet, which make the flow going out of the outlet swing. Flow spreading mechanism of the present invention provides a better uniformity of temperature distribution for refrigerators or air conditioners, compared with the simple-ducted outlet of the prior art.

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CLASSIFICATION OF SUBJECT MATTER

IPC⁷: F24F 13/04, B01F 5/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC⁷: F24F, B01F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EpoDoc, WPI, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	FR 2043074 A (MAN) 12 February 1971 (12.02.1971) <i>the whole document.</i>	1 - 21
X	FR 2784313 A (BRUNON) 14 April 2000 (14.04.2000) <i>the whole document.</i>	1 - 21
X	US 6135629 A (DOHMANN) 24 October 2000 (24.10.2000) <i>the whole document.</i>	1 - 21
X	US 2001/0053108 A (JAHN) 20 December 2001 (20.12.2001) <i>the whole document.</i>	1 - 21

☐ Further documents are listed in the continuation of Box C.☒ See patent family annex.

* Special categories of cited documents:

„A“ document defining the general state of the art which is not considered to be of particular relevance

„E“ earlier application or patent but published on or after the international filing date

„L“ document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

„O“ document referring to an oral disclosure, use, exhibition or other means

„P“ document published prior to the international filing date but later than the priority date claimed

„T“ later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

„X“ document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

„Y“ document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

„&“ document member of the same patent family

Date of the actual completion of the international search

10 November 2004 (10.11.2004)

Date of mailing of the international search report

2 December 2004 (02.12.2004)

Name and mailing address of the ISA/AT

Austrian Patent Office

Dresdner Straße 87, A-1200 Vienna

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/KR 2002/002272

Patent document cited in search report			Publication date	Patent family member(s)			Publication date
FR	A	2043074	1971-02-12	DE	A	1917962	1971-02-25
				BE	A	748677	1970-09-06
FR	A	2784313	2000-04-14	EP	A	1128890	2001-09-05
				WO	A	0020097	2000-04-13
				AU	A	6093099	2000-04-26
US	A	20010053 108		none			
US	A	6135629	2000-10-24	TW	B	499321	2002-08-21
				JP	A	2000061283	2000-02-29
				PL	A	333040	1999-11-22
				EP	A	0956897	1999-11-17
				DE	A	19820992	1999-11-18